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# User's Guide to Technical Bulletins

## Including Key Word/Subject Index

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FEDERAL EMERGENCY MANAGEMENT AGENCY  
FEDERAL INSURANCE ADMINISTRATION

FIA-TB-O  
(4/93)

## **TECHNICAL BULLETIN GUIDE-93**

### **User's Guide to Technical Bulletins Including Key Word/Subject Index**

#### The User's Guide

This User's Guide is intended to assist those using the Technical Bulletins issued by the Federal Insurance Administration, Office of Loss Reduction. This guide includes a Key Word/Subject Index that identifies topics contained in the Technical Bulletins regarding the National Flood Insurance Program (NFIP). Reference sources and information about ordering additional NFIP publications are also provided.

#### The Technical Bulletins

The Technical Bulletins provide guidance concerning the building performance standards of the NFIP, which are contained in Title 44 of the U.S. Code of Federal Regulations at Section 60.3. The bulletins are intended for use primarily by State and local officials responsible for interpreting and enforcing NFIP regulations and by members of the development community, such as design professionals and builders. New bulletins, as well as updates of existing bulletins, are issued periodically, as necessary. The bulletins do not create regulations; rather they provide specific guidance for complying with the minimum requirements of existing NFIP regulations. Users of the Technical Bulletins who need additional guidance concerning NFIP regulatory requirements should contact the appropriate FEMA regional office (see page 5).

Comments on the Technical Bulletins Series should be addressed to:

FEMA/FIA  
Office of Loss Reduction  
Technical Standards Division  
500 C St., S. W., Room 417  
Washington, D.C. 20472

Copies of the Technical Bulletins can be obtained from the appropriate FEMA regional office. Technical Bulletins can also be ordered from the FEMA publications warehouse. Use of FEMA Form 60-8 will result in a more timely delivery from the warehouse — the form can be obtained from FEMA regional offices and your state's Office of Emergency Management. Send publication requests to FEMA Publications, P.O. Box 70274, Washington, D.C. 20024.

It should be noted that Technical Bulletins provide guidance on the minimum requirements of the NFIP regulations. Community or State requirements that exceed those of the NFIP take precedence. Design professionals should contact the community to determine whether more restrictive local or State regulations apply to the building or site in question. AH applicable standards of the State or local building code must also be met for any building in a flood hazard area.

## Available Technical Bulletins

As of April 1993, the following Technical Bulletins are available:

- Guide-93      User's Guide to Technical Bulletins
- Provides a list of available technical bulletins, a key word/subject reference index for all the bulletins, and information about how to obtain copies of the bulletins.
- 1-93      Openings in Foundation Walls
- Provides guidance on the NFIP regulations concerning the requirement for openings in below-Base Flood Elevation foundation walls for buildings located in Zones A, AE, A1-A30, AR, AO, and AH.
- 2-93      Flood-Resistant Materials Requirements
- Provides guidance on the NFIP regulations concerning the required use of flood-damage-resistant construction materials for building components located below the Base Flood Elevation in Special Flood Hazard Areas (both A and V zones).
- 3-93      Non-Residential Floodproofing — Requirements and Certification
- Provides guidance on the NFIP regulations concerning watertight construction and the required certification for floodproofed non-residential buildings in Zones A, AE, A1 -A30, AR, AO, and AH whose lowest floors are below the Base Flood Elevation.
- 4-93      Elevator Installation
- Provides guidance on the NFIP regulations concerning the installation of elevators below the Base Flood Elevation in Special Flood Hazard Areas (both A and V zones).
- 5-93      Free-of-Obstruction Requirements
- Provides guidance on the NFIP regulations concerning obstructions to floodwaters below elevated buildings and on building sites in Coastal High Hazard Areas (Zones V, VE, and V1-V30).
- 6-93      Below-Grade Parking Requirements
- Provides guidance on the NFIP regulations concerning the design of below-grade parking garages beneath buildings located in Zones A, AE, A1 -A30, AR, AO, and AH.

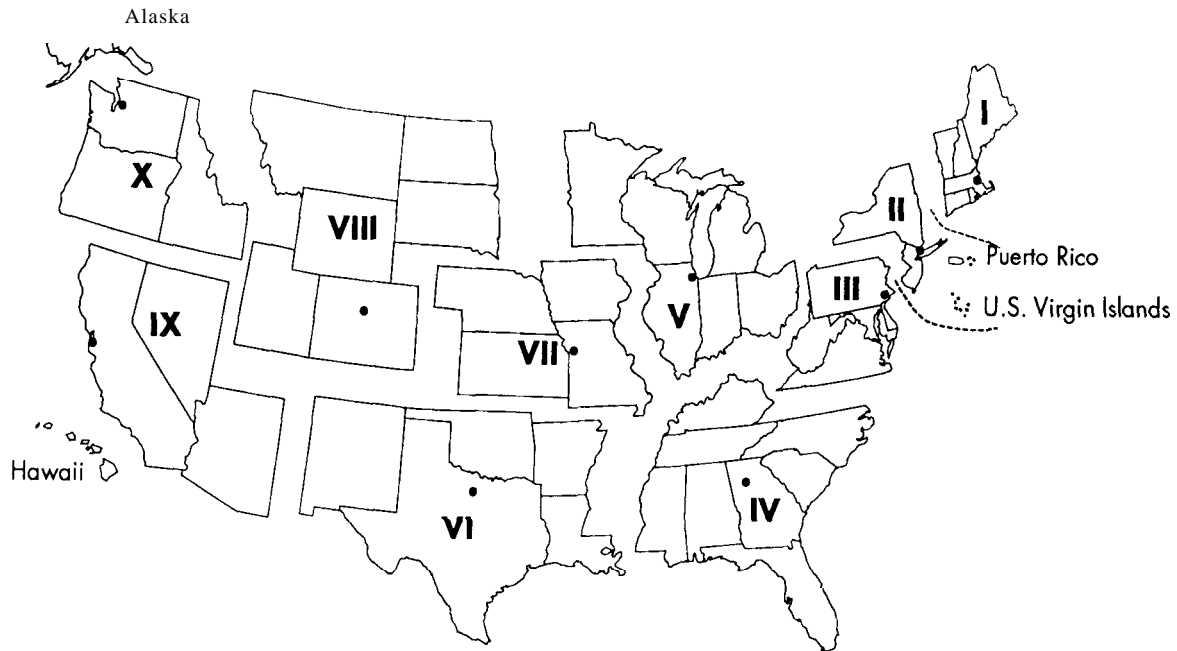
## Key Word/Subject Index

This index is designed to allow the user to quickly locate key words that pertain to the subject in question. The index also cross-references issues that are addressed by more than one Technical Bulletin. For example, users of Technical Bulletin 6 (Below-Grade Parking Requirements) should also refer to Technical Bulletin 3 (Non-Residential Floodproofing — Requirements and Certification) concerning insurance rating issues.

Technical Bulletin	Key words and Subjects
3	A-zone floodproofing
5	accessory buildings, as possible obstructions in V zones
5	accessory buildings, low value and small, defined
1	basement, definition of
6	below-grade parking garage, considered a basement
6	below-grade parking garage, defined
6	below-grade parking in A and V zones, when allowed, requirements for
2	breakaway wall materials in V zones, made of flood-resistant materials
5	bulkheads, as possible obstructions in V zones
5	decks and patios, as possible obstructions in V zones
5	detached garages, elevation requirement for in V zones
4	elevators, types of
4	elevator components, location of in relation to base flood elevation
4	elevator electrical equipment, location of in relation to base flood elevation
5	fill, as obstruction beneath buildings in V zones
4	float switch, use of in flood areas (for elevator cab)
4	flood-resistant elevator components, use of
2	flood-resistant flooring materials
2	flood-resistant material, definition of
2	flood-resistant materials, classifications, use of
2	flood-resistant wall and ceiling materials
3	floodproofing certificate, non-residential
6	floodproofing, below-grade parking beneath non-residential buildings, design requirements for

3	floodproofing, Emergency Operations Plan, minimum acceptable
3	floodproofing, Inspection and Maintenance Plan
3,6	floodproofing, recognition of for insurance rating purposes
5	foundation bracing, as possible obstructions in V zones
1	foundations in A zones
1	foundation openings in A zones, size, how to calculate
1	foundation vents in A zones
5	free of obstruction, definition of
5	free of obstruction, designing a foundation system in V zones
5	free of obstruction requirement in V zones
1	garages attached to residential buildings
1	garage doors, to meet the openings requirement
5	grade beams, as possible obstructions in V zones
3	high hazard area, safety and access in
3	hydrodynamic forces on floodproofed building
3	hydrostatic forces on floodproofed building
1	hydrostatic pressure, automatically equalized
1	hydrostatic pressure, how to calculate
2	insect screening in V zones, made of flood-resistant materials
2	laticework in V zones, made of flood-resistant materials
3	lowest floor, definition of
3	non-residential floodproofing certificate, how to fill out
1	openings for foundations in A zones
1	safety factor for foundation openings
5	swimming pools, beneath buildings in V zones
1	substantial damage, foundation wall openings requirement
1	substantial improvement, foundation wall openings requirement
2	U.S. Army Corps of Engineers, "Floodproofing Regulations"

## FEMA Regional Offices



Region I    Natural Hazards Branch  
462 J.W. McCormick POCH  
Boston, MA 02109-4595  
(617) 223-9561

Region II    Natural Hazards Branch  
26 Federal Plaza, Room 1338  
New York, New York 10278-0002  
(212) 225-7202

Region III    Natural Hazards Branch  
Liberty Square Bldg. (2nd floor)  
105 South Seventh Street  
Philadelphia, PA 19106-3316  
(215) 931-5750

Region IV    Natural Hazards Branch  
Suite 700  
1371 Peachtree Street, N.E.  
Atlanta, GA 30309-3108  
(404) 853-4400

Region V    Natural Hazards Branch  
175 West Jackson (4th floor)  
Chicago, IL 60604-2698  
(312) 408-5533

Region VI    Natural Hazards Branch  
Federal Regional Center, Room 206  
800 North Loop 288  
Denton, TX 76201-3698  
(817) 898-5127

Region VII    Natural Hazards Branch  
911 Walnut Street, Room 200  
Kansas City, MO 64106-2085  
(816) 283-7002

Region VIII    Natural Hazards Branch  
Denver Federal Center  
Building 710, Box 25267  
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(303) 235-4830

Region IX    Natural Hazards Branch  
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San Francisco, CA 94129-1250  
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Region X    Natural Hazards Branch  
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130 228th Street, S.W.  
Bothell, WA 98021-9796  
(206) 487-4682

Other federal agencies that provide floodplain management assistance include the U.S. Army Corps of Engineers and the U.S. Soil Conservation Service. For their nearest locations, please refer to your local telephone directory under "United States Government."